

Supplementary Information for:

**Targeting EZH2-mediated methylation of H3K27 inhibits proliferation and migration of
Synovial Sarcoma *in vitro***

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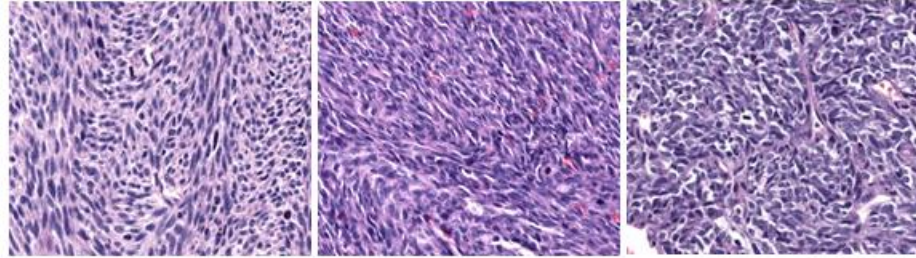
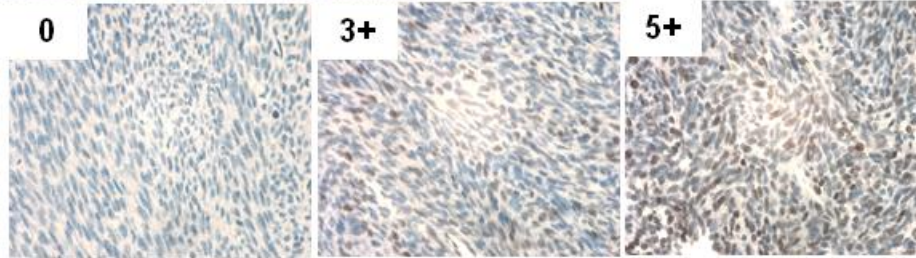
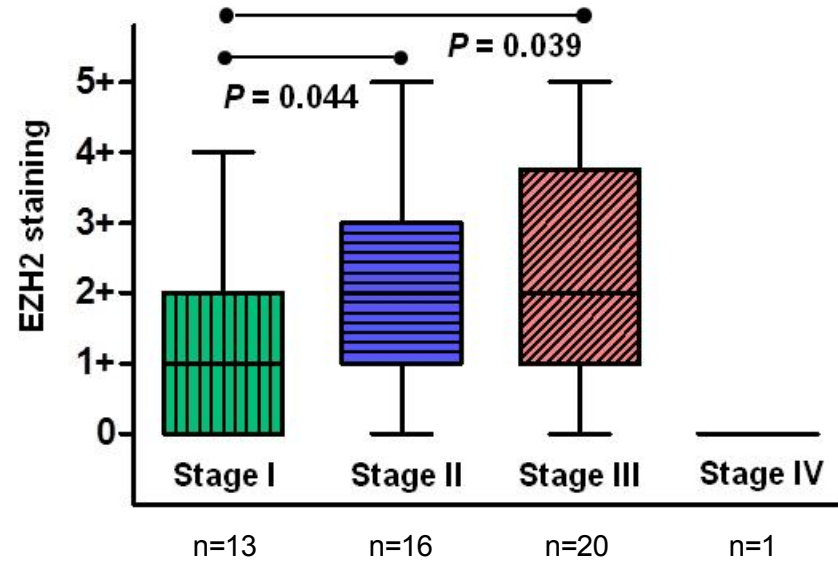
Supplementary Figure S1. Correlation of EZH2 expression and histopathology of synovial sarcoma patient tissues. **a**, Representative images of nuclear staining intensity of EZH2 or HE staining in synovial sarcoma tumor tissues. **b**, Distribution of EZH2 staining scores between clinical stages.

Supplementary Figure S2. Determination of the fusion gene variant in the Aska-SS, Yamato-SS, Fuji, and SYO-1 synovial sarcoma cell lines by quantitative real time RT-PCR.

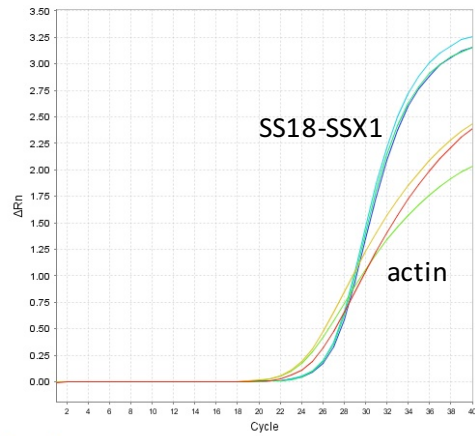
Supplementary Figure S3. The chordoma UCH2 cell line and the liposarcoma SW872 cell line treated with EPZ005687 over 14 days as evaluated by the MTT assay. They do not contain the SS18-SSX translocation, and thus, were used as controls.

Supplementary Figure S4. Migration images of EPZ005687 treated synovial sarcoma cell lines. SYO-1 and Aska-SS cells were treated with increasing concentrations of EPZ005687, and cell migration distances were measured over 48 hours.

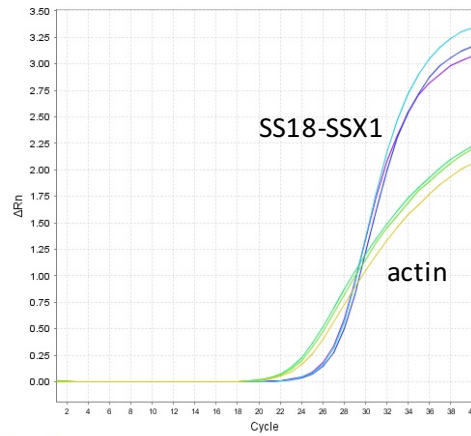
Supplementary Figure S5. EPZ005687 in combination with etoposide, topotecan, or doxorubicin chemotherapy in SYO-1 and Aska-SS synovial sarcoma cell lines.

a**HE**
400X**IHC**
400X**b**

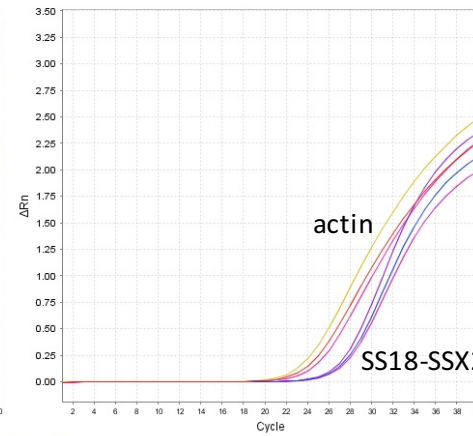
Aska



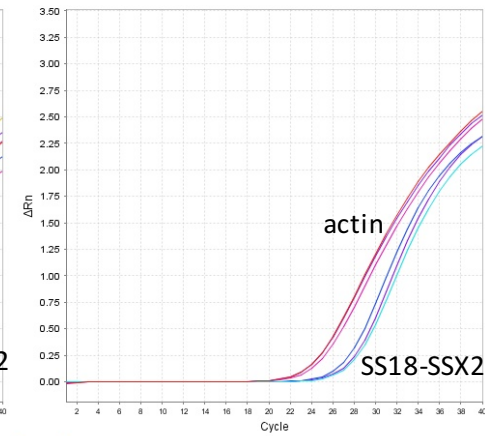
Yamato



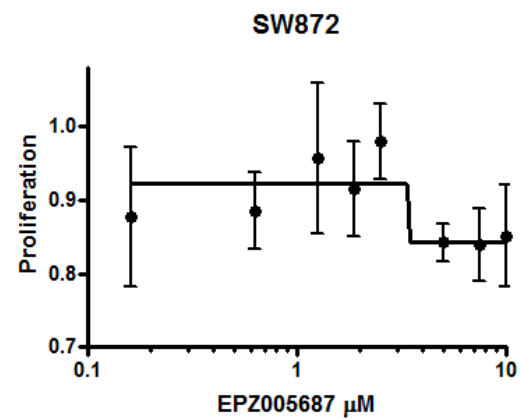
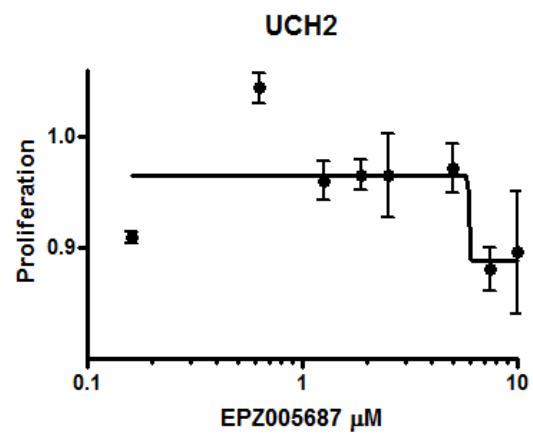
Fuji



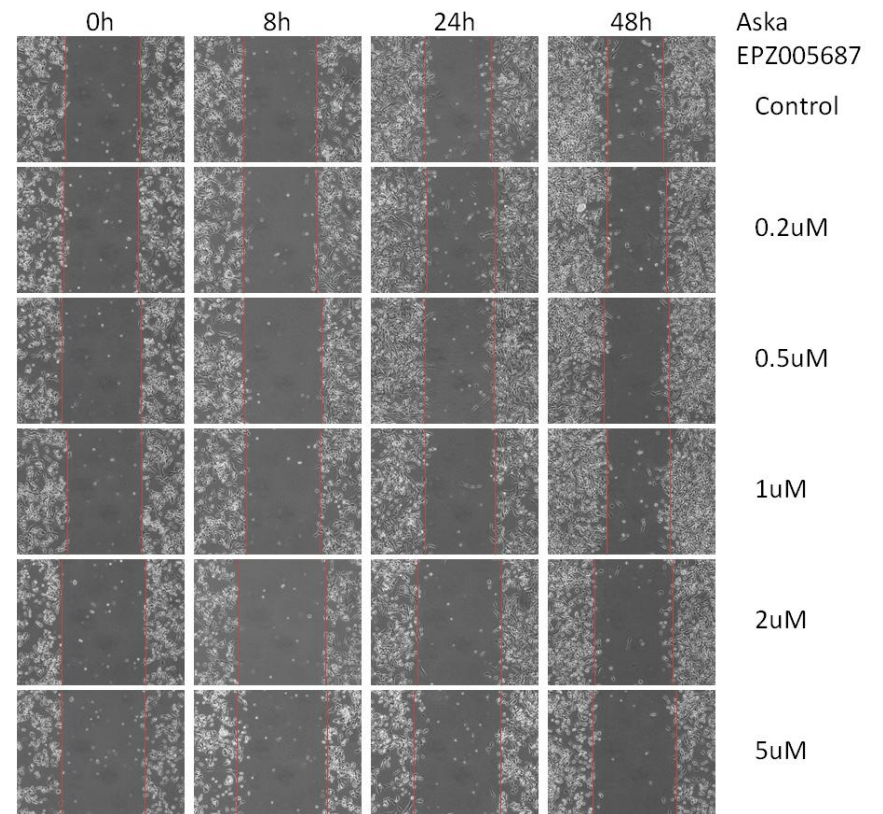
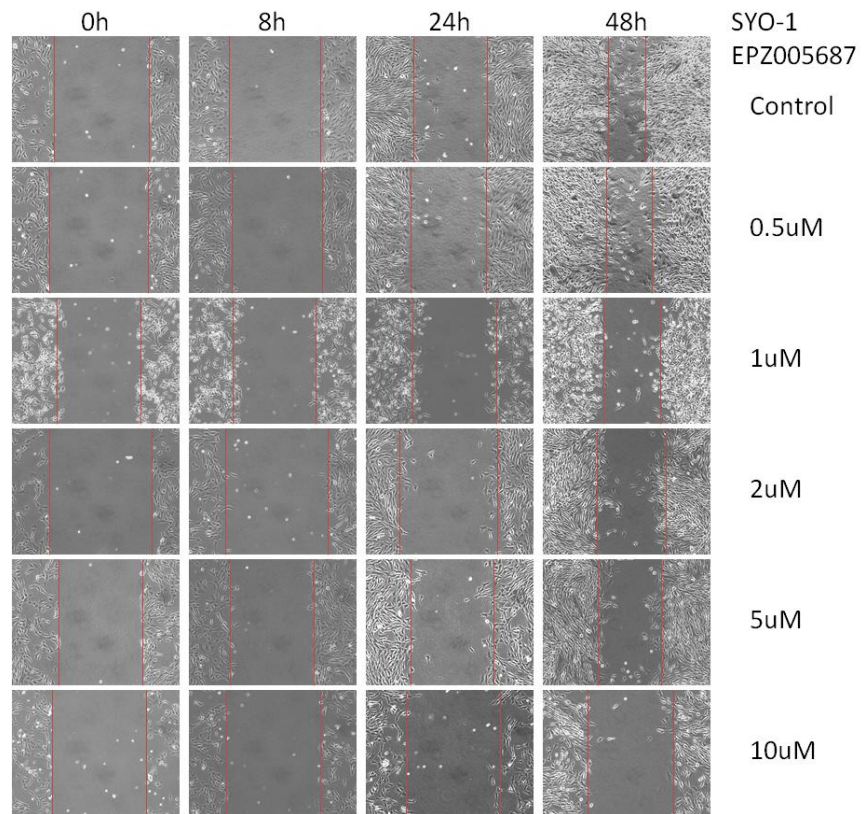
SYO-1



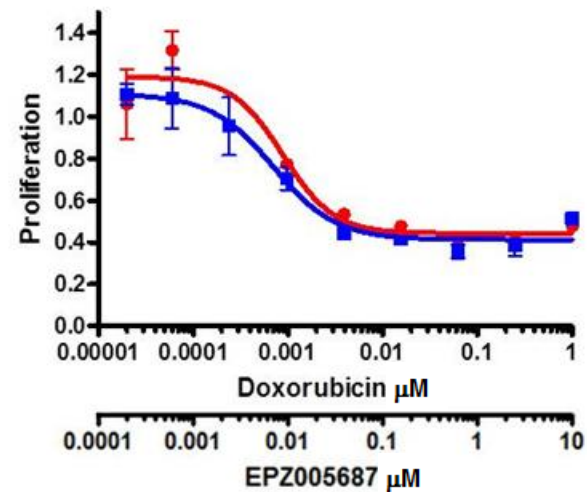
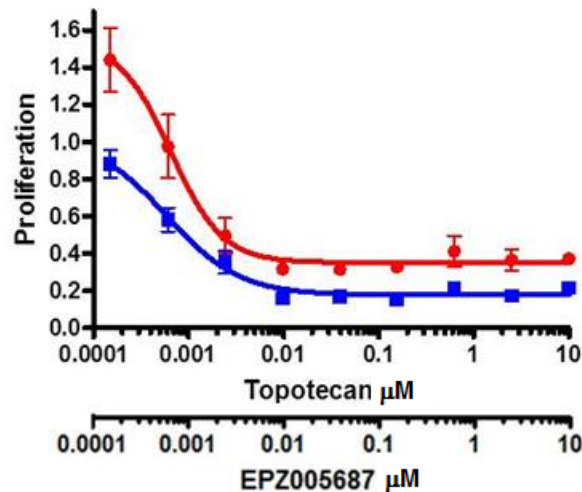
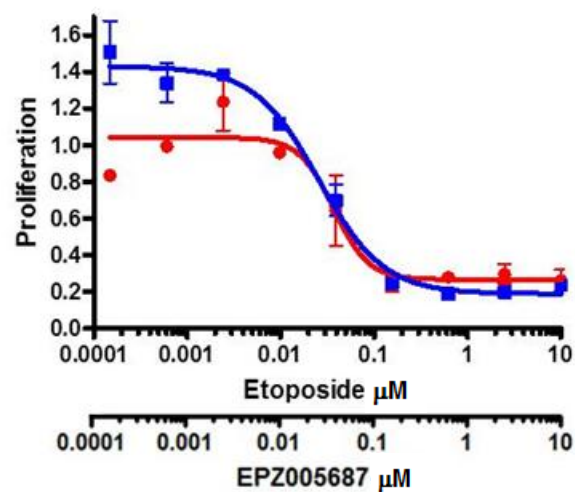
Cell line	Fusion protein variant
Aska	SS18-SSX1
Yamato	SS18-SSX1
Fuji	SS18-SSX2
SYO-1	SS18-SSX2



Supplementary Figure S4



SYO-1



● Etoposide
■ Etoposide + EPZ005687

● Topotecan
■ Topotecan + EPZ005687

● Doxorubicin
■ Doxorubicin + EPZ005687

Aska

